

AUTOMATIC IN SITU PELLICLE HEIGHT MEASUREMENT SYSTEM

ABSTRACT OF THE DISCLOSURE

5

A method for measuring a thickness of a photolithography element, such as a pellicle, includes projecting a light beam from a first side of the pellicle and at a plane above a first surface of the pellicle, projecting the light beam from the first side of the pellicle and at a plane corresponding to a plane of the pellicle, and
10 projecting the light beam from the first side of the pellicle and at a plane below a second surface of the pellicle. The light beam can be projected from a laser light source. The light beams are projected at different media above and below the pellicle. The light beams pass through the first side of the different media and exit at a second side opposite to the first side at different intensities. The light beam may
15 not pass through the pellicle if the light beam is incident to an opaque pellicle frame, and thus has minimal intensity at the second side. The resulting intensity of the projected light beams is detected at the second side by a detector, and an index corresponding to each detected resulting intensity is generated. The thickness of the pellicle is determined based on the generated indexes.

20

004184/P1004/P1004-AP/v2